


TRADE NAME Hallcrafters, Model S-40  
 MANUFACTURER The Hallcrafters Co., Chicago 16, Illinois  
 TYPE SET AC Operated 4 Band Superheterodyne Communications - Commercial Type Receiver  
 TUBES (NINE) Types 6SG7 RF Amp., 6SA7 Mixer & Local Oscillator, 6SK7 1st IF Amp., 6SK7 2nd IF Amp.  
 6SK7 Det.-1AF, 6F6G Power Output, 6H6 AVC & Noise Limiter, 6J5GT Beat Frequency Osc.,  
 80 Rectifier.  
 POWER SUPPLY 117 Volts AC Rating .715 Amp. @ 117 Volts AC  
 6 Volt DC - Current Drain (Filament only, 5 amperes)  
 Approx. 10 Amperes. Vibrator Power Supply  
 TUNING RANGE—BROADCAST (Band 1) 550-1700KC SHORT WAVE (Band 2) 1.68-5.4MC (Band 3) 5.3-15.8MC  
 (Band 4) 15.3-44MC

ALIGNMENT INSTRUCTIONS

DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
	High side to stator plates of center section of main tuning gang. Low side to chassis.	455KC	1	High end of band.	Across voice coil	A1,A2, A3,A4, A5,A6.	Adjust for maximum output. Repeat until assured of accurate alignment. Signal level at the generator should be app. 52 microvolts for a 500 milliwatt audio output level.
	"	"	"	"	"	"	Turn off 400-cycle modulation on signal generator. Remove pitch control knob with an Allen wrench and adjust slotted screw shaft for zero beat. Replace knob so that red mark is on top.
390 ohm res. + 20% (non-inductive)	High side to terminal A1 of antenna terminal board. (leave jumper between A2 and GND. Low side to chassis.	36MC	4	36MC	"	A7	Adjust for maximum output.
"	"	18MC	"	18MC	"	A8	Adjust for maximum output and repeat step on A7. If greatly detuned repeat adjustments on A7 and A8 several times.
"	"	36MC	"	36MC	"	A9,A10	Adjust for maximum output.
"	"	18MC	"	18MC	"	A11,A12	Adjust for maximum output and if greatly detuned repeat adjusts on A9,A10, A11 and A12 for maximum.
"	"	14MC	3	14MC	"	A13	Adjust for maximum output.
"	"	7MC	"	7MC	"	A14	Adjust for maximum output. Recheck adjust on A13 at 14MC and A14 at 7MC for maximum.
"	"	10MC	"	10MC	"	A15	Adjust for maximum output. Recheck A13 at 14MC and A14 at 7MC.
"	"	14MC 7MC	"	14MC 7MC	"	A16,A17 A18,A19	Adjust for maximum output. Repeat adjustments as given on A16, A17, A18 and A19 for maximum output.
"	"	5MC	2	5MC	"	A20	Adjust for maximum output.
"	"	1.8MC	"	1.8MC	"	A21	Adjust for maximum output. Repeat adjustments as given on A20 and A21 for maximum output.
"	"	3MC	"	3MC	"	A22	Adjust for maximum output. Recheck A20 at 5MC and A21 at 1.8MC for maximum output.
"	"	5MC	"	5MC	"	A23,A24	Adjust for maximum output.
"	"	1500KC	1	1500KC	"	A25	Adjust for maximum output.
"	"	600KC	"	600KC	"	A26	Adjust for maximum output. Recheck A25 at 1500KC for maximum output.
"	"	1000KC	"	1000KC	"	A27	Adjust for maximum output. Repeat adjustments on A25 and A26 for maximum output at 1500 and 600KC.
"	"	1500KC	"	1500KC	"	A28,A29	Adjust for maximum output.

Before aligning allow approximately 10 minutes for signal generator and receiver to warm up. Use insulated alignment screwdriver for adjusting. Output from signal generator modulated at 400 Cycles and output attenuator on signal generator adjusted to give 500 milliwatt audio output on the output meter. Set receiver controls as follows: Sensitivity Control at maximum sensitivity (full clockwise). Volume Control at maximum volume (full clockwise)

A.V.C. Switch at off.  
 Noise Limiter Switch at off.  
 CW-AM Switch at AM.  
 Tone Control at High.  
 Standby Receive Switch at Receive.  
 After completing the RF alignment check the image frequency to determine whether the oscillator frequency is higher than the signal frequency on bands 1, 2, and 3 and lower than signal frequency on band 4.



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# PARTS LIST AND DESCRIPTIONS

## R F COILS

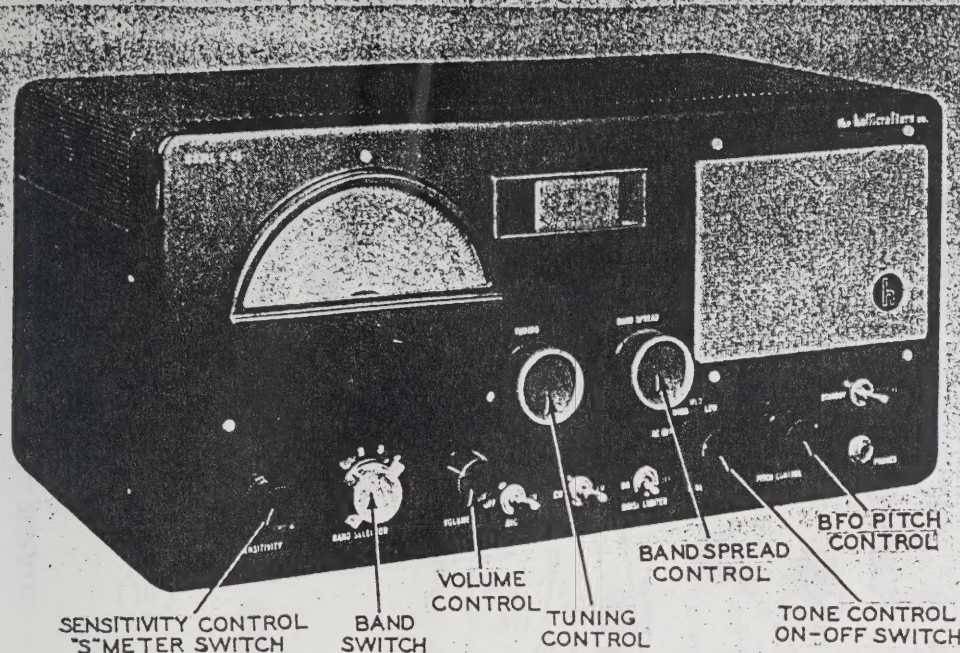
ITEM No.	USE	DC RES.			REPLACEMENT DATA	
		PRI.	SEC.		HALLI-CRAFTER PART No.	MEISSNER PART No.
77	Band 4 Ant.	.12	02		51B783	
78	Band 3 Ant.	.12	02		51B782	
79	Band 2 Ant.	.52	1.52		51B781	
80	Band 1 Ant.	.52	52		51B780	
81	Band 4 RF	1.22	02		51B787	
82	Band 3 RF	7.52	02		51B786	
83	Band 2 RF	.82	52		51B785	
84	Band 1 RF	.12	02		51B784	
85	Band 4 Osc.	02	02		51B791	
86	Band 3 Osc.	02	02		51B790	
87	Band 2 Osc.	.12	1.22		51B789	
88	Band 1 Osc.	.52	52		51B788	
89	Input IF	212	6.52		50H155	
90	Interstage IF	202	42		50C155	
91	Output IF	182	182		50C192	
92	B.F.O.	112			54B028	

## DIAL LIGHT

ITEM No.	BASE TYPE	VOLTS	AMPS.	REPLACEMENT DATA		INSTALLATION NOTES
				BEAD COLOR	HALLI-CRAFTER PART No.	
93	Bayonet	6-8	0.25	Blue	39A003	Type 44
94		6-8	0.25	Blue	39A003	"

## MISCELLANEOUS

ITEM No.	PART NAME	HALLI-CRAFTER PART No.	NOTES
414	Trimmer	44B141	Oscillator Pad, Band 3
421	"	44A024	Oscillator Pad, Band 2
426	"	44A142	Oscillator Pad, Band 1
95A	Band Switch	62B039	Antenna & RF Sections
95B	"	62A044	Osc. Sections
95C	"	74C172	Drive Shaft
96	Switch (AVC)	50A138	SPST Toggle
97	Switch (NL)	50A138	"
98A	Switch (Tone)	60A225	SP4T Tone Switch
98B	" (On-Off)	60A225	SPST On-Off
99	Switch (AM-CM)	60A138	SPST Toggle
100	Switch (SP-REC)	60A138	"
	Tuning Cap.	43C138	Main Tuning & bandsread Caps.
	Jack (Head Ph.)	38A002	Closed Circuit







## PARTS LIST AND DESCRIPTIONS

## CHASSIS—TOP VIEW

## TUBES

ITEM No.	USE	REPLACEMENT DATA		RMA BASE TYPE	INSTALLATION NOTES
		HALL-UNIT PART No.	STANDARD REPLACEMENT		
1	AF Amp. & Local Oscillator	6SK7	6SK7	9BK	
2	1st IF Amp.	6SK7	6SK7	6R	
3	2nd IF Amp.	6SK7	6SK7	6R	
4	Det. 1st Audio Amp.	6SK7	6SK7	6Q	
5	Power Output	6SK7	6SK7	7S	
6	AVC & Noise	6H6	6H6	7C	
7	Rectifier	6X4	6X4	7C	

## CAPACITORS

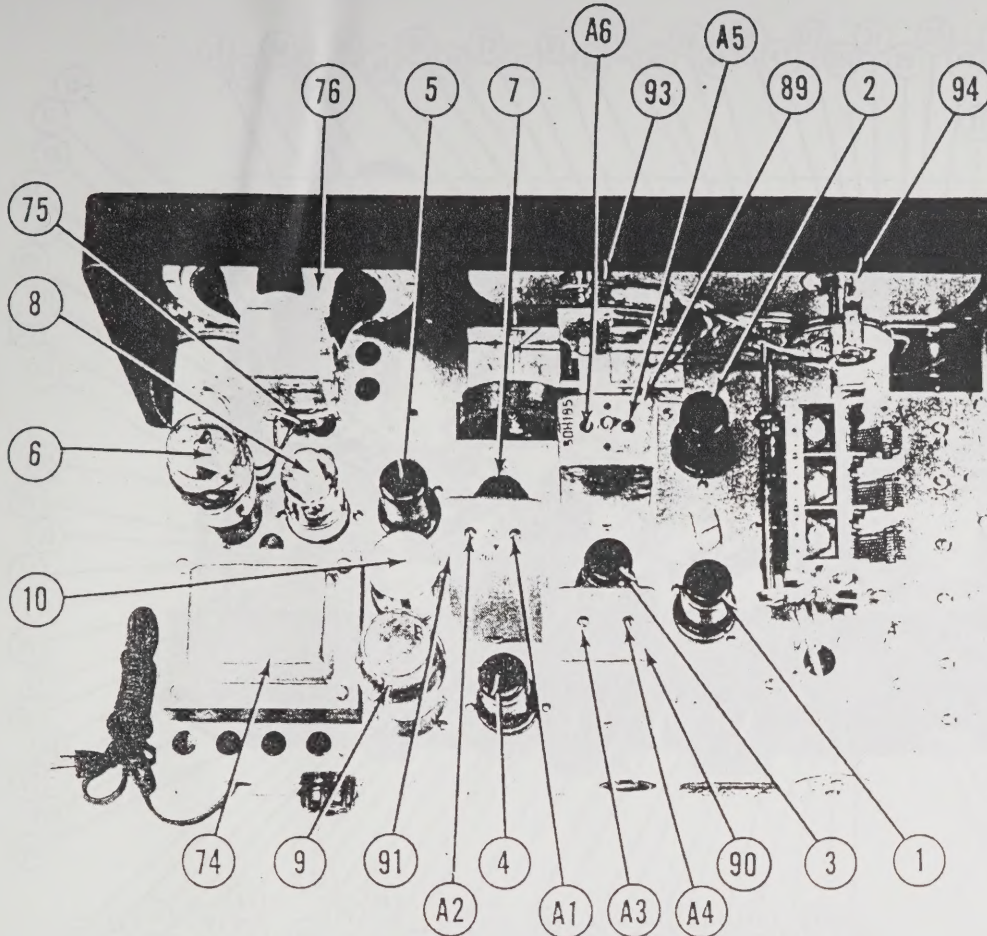
Capacity values given in the rating column are in mfd. for Electrolytic and Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING	REPLACEMENT DATA				IDENTIFICATION CODES AND INSTALLATION NOTES
		HALL-UNIT PART No.	MALLOY PART No.	SOLAR PART No.	SPRAGUE PART No.	
10(A)	50	45A032	PT429	ET-4X10-450	ET-124	UP9D153
11	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
12	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
13	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
14	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
15	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
16	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
17	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
18	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
19	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
20	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
21	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
22	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
23	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
24	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
25	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
26	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
27	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
28	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
29	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
30	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
31	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
32	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
33	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
34	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
35	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
36	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
37	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
38	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
39	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
40	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
41	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
42	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
43	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
44	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
45	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
46	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
47	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
48	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
49	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
50	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
51	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
52	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
53	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
54	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
55	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
56	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
57	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
58	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
59	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
60	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
61	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
62	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
63	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
64	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
65	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
66	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
67	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
68	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
69	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
70	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
71	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
72	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
73	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
74	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
75	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
76	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
77	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
78	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
79	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
80	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
81	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
82	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
83	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
84	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
85	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
86	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
87	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
88	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
89	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
90	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
91	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
92	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
93	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass
94	10	45A034	TC25	ET-4X10-450	TC-25	6R6 Cath. Bypass

On Solars, Sprague, and Cornell Dubilier parts, capacity values do not contact 50 pfd, 25 volt section. On Solars, replace parts in parallel three sections.

## CONTROLS

ITEM No.	RATING	REPLACEMENT DATA				INSTALLATION NOTES
		HALL-UNIT PART No.	MALLOY PART No.	IRC PART No.	CLAROSTAT PART No.	
40(A)	500K	25A534	Not Req.	D13-153	RI-60-6	Volume control
41(A)	500K	25A534	Not Req.	D13-153	RI-60-6	Hot Req. per Instructions
42	Switch	25A534	Not Req.	D13-153	RI-60-6	Sensitivity Control
43	Switch	25A534	Not Req.	D13-153	RI-60-6	Attach to 41A per Instructions







# PARTS LIST AND DESCRIPTIONS RESISTORS

ITEM No.	RATING		REPLACEMENT DATA		IDENTIFICATION CODES
	RESISTANCE	WATTS	HELLI- PART No.	IRC PART No.	
42	250		RC20-22203	22-2-250	Red-Red-Blk. RF Grid Suppressor
43	120		RC20-22216	22-2-120	Gr.-Red-Gr. AF Cathode Bias
44	250		RC20-22216	22-2-250	Red-Red-Blk. RF Plate Suppressor
45	1000		RC20-22216	22-2-1000	Gr.-Blk.-Yl. AVC Filter
46	1000		RC20-22216	22-2-1000	Gr.-Blk.-Red. Screen Dropping
47	350		RC20-22216	22-2-350	In Line-Array-Red. RF Transformer Load
48	1000		RC20-22216	22-2-1000	Gr.-Gray-Gr. Osc. Grid
49	1000		RC20-22216	22-2-1000	Gr.-Blk.-Gr. Osc. Suppressor
50	1000		RC20-22216	22-2-1000	Gr.-Blk.-Gr. Osc. Plate Dropping
51	1000		RC20-22216	22-2-1000	Gr.-Blk.-Red. 1st IF Cathode
52	1000		RC20-22216	22-2-1000	Gr.-Blk.-Red. 2nd IF Cathode
53	1000		RC20-22216	22-2-1000	Gr.-Red-Gr. Conv. Plate Decoupling
54	1000		RC20-22216	22-2-1000	Red-Red-Gr. AVC Decoupling
55	1000		RC20-22216	22-2-1000	Gr.-Blk.-Gr. Diode Load
56	1000		RC20-22216	22-2-1000	Gr.-Blk.-Yl. Noise Limiter
57	1000		RC20-22216	22-2-1000	Yl.-Yl.-Yl. Noise Limiter
58	1000		RC20-22216	22-2-1000	Red-Yl.-Yl. Diode Filter
59	1000		RC20-22216	22-2-1000	Gr.-Blk.-Gr. 1st AF Cathode-See Note 2
60	1000		RC20-22216	22-2-1000	Gr.-Gr.-Gr. 1st AF Cathode-See Note 1
61	1000		RC20-22216	22-2-1000	Gr.-Gr.-Gr. 1st AF Plate Dropping
62	1000		RC20-22216	22-2-1000	Gr.-Gr.-Gr. 1st AF Plate Load
63	1000		RC20-22216	22-2-1000	Gr.-Gr.-Gr. 1st AF Osc. Grid
64	1000		RC20-22216	22-2-1000	Gr.-Gr.-Gr. 1st AF Osc. Grid
65	1000		RC20-22216	22-2-1000	Gr.-Gr.-Gr. 1st AF Osc. Grid
66	1000		RC20-22216	22-2-1000	Gr.-Gr.-Gr. 1st AF Osc. Grid
67	1000		RC20-22216	22-2-1000	Gr.-Gr.-Gr. 1st AF Osc. Grid
68	1000		RC20-22216	22-2-1000	Gr.-Gr.-Gr. 1st AF Osc. Grid
69	1000		RC20-22216	22-2-1000	Gr.-Gr.-Gr. 1st AF Osc. Grid
70	1000		RC20-22216	22-2-1000	Gr.-Gr.-Gr. 1st AF Osc. Grid
71	1000		RC20-22216	22-2-1000	Gr.-Gr.-Gr. 1st AF Osc. Grid
72	1000		RC20-22216	22-2-1000	Gr.-Gr.-Gr. 1st AF Osc. Grid
73	1000		RC20-22216	22-2-1000	Gr.-Gr.-Gr. 1st AF Osc. Grid

Note 1-Used in early production.  
Note 2-Used in later production.

## TRANSFORMER (POWER)

ITEM No.	RATING			REPLACEMENT DATA	
	PRI.	SEC. 1	SEC. 2	HELLI- PART No.	THORDARSON PART No.
74	117VAC 1.71EA 1.665	500V(0.01-0.05) 1.665	1.665	160121	Use mounting brackets that are supplied with replacement transformer.

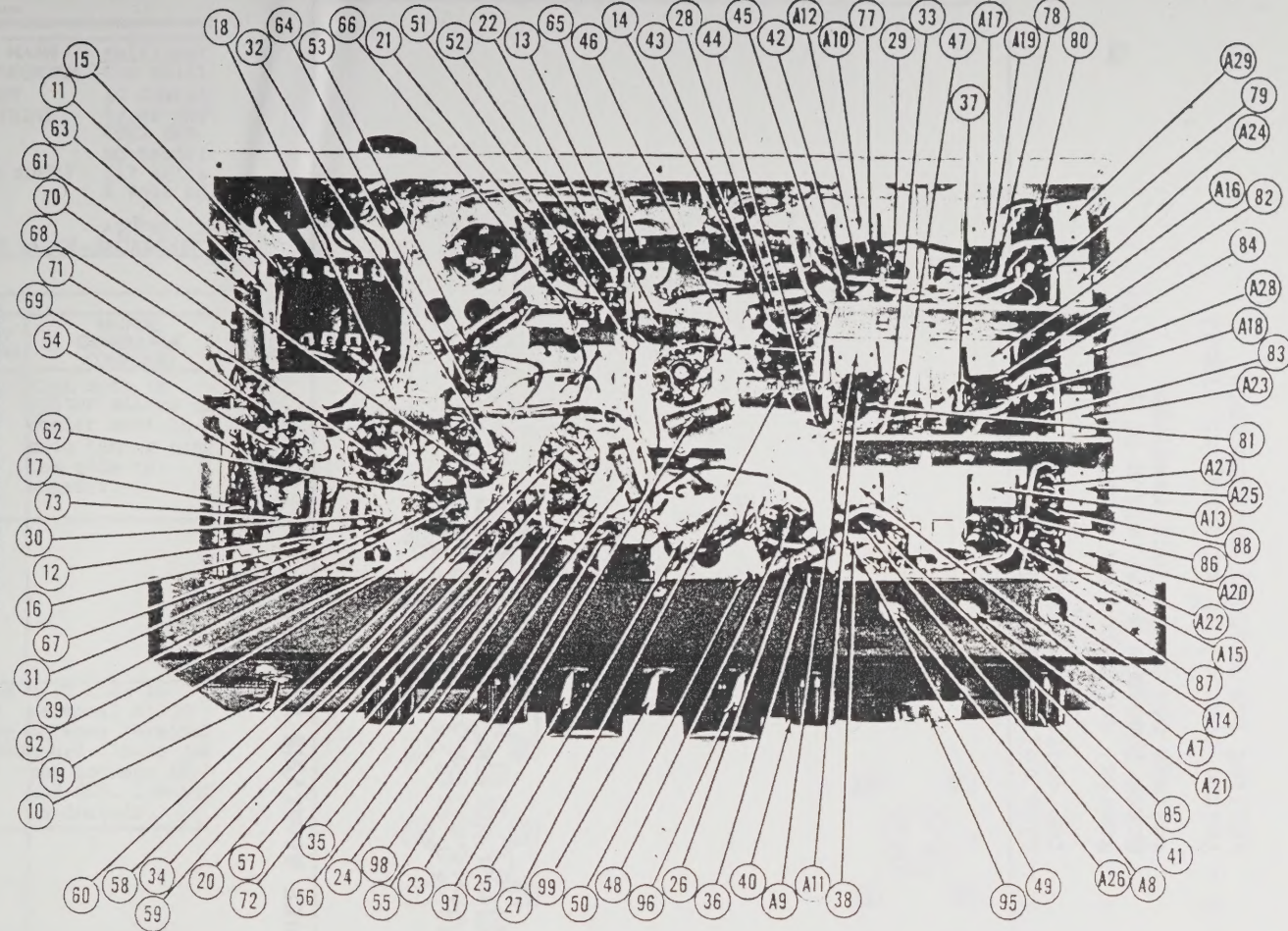
## TRANSFORMER (OUTPUT)

ITEM No.	RATING			REPLACEMENT DATA		INSTALLATION NOTES
	IMPEDANCE	DC RES.	SEC.	HELLI- PART No.	THORDARSON PART No.	
75	1600	2.00	1.665	160121	160121	Use mounting brackets that are supplied with replacement transformer.

## SPEAKER

ITEM No.	RATINGS			REPLACEMENT DATA		INSTALLATION NOTES
	FIELD	DC RES.	SEC.	HELLI- PART No.	JENSEN PART No.	
76	1600	2.00	1.665	160121	160121	Use mounting brackets that are supplied with replacement transformer.

# CHASSIS—BOTTOM VIEW









TRADE MARK

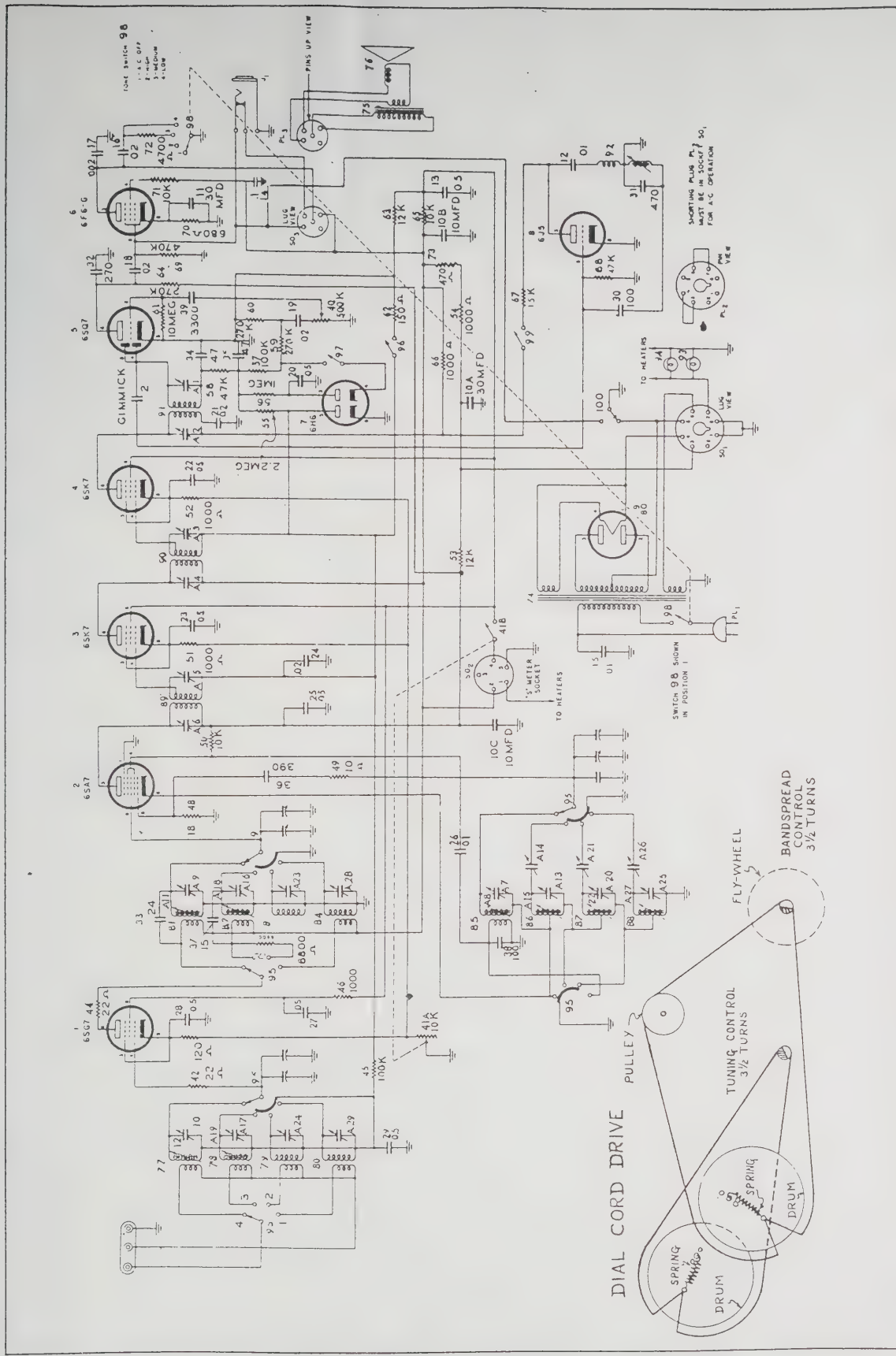
TUNING RANGE—BROADCAST

Before aligning allow ap  
for signal generator and  
Use insulated alignment  
ing. Output from signal  
400 Cycles and output at  
erator adjusted to give  
put on the output meter.  
Set receiver controls as  
Sensitivity Control at  $\pi$   
(full clockwise).  
Volume Control at maximum

- 1 - DC Voltage measurements are at 20,000 ohms per volt: AC Voltages measured at 1000 ohms per volt.
- 2 - Socket connections are shown as bottom views.
- 3 - Measured values are from socket pin to common negative.
- 4 - Line voltage maintained at 117 volts for voltage readings.
- 5 - Nominal tolerance on component values makes possible a variation of  $\pm 10\%$  in voltage and resistance readings.
- 6 - Volume control at maximum, no signal applied for voltage measurements.







The stage gain measured values listed above are approximate values for an average operative stage, rather than an absolute value. It should be borne in mind that it is possible to introduce so many variables into the measurement operation, such as, type of equipment used for measuring, handling and placement of probes, the accuracy of alignment, etc., that an absolute reading is impractical. AVC is made inoperative and 3-volt battery bias substituted for measurement.

HOWARD W. SAMS & CO., INC.

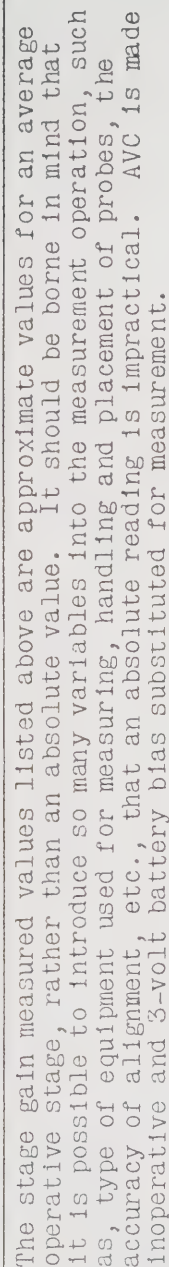
2924 EAST WASHINGTON STREET • INDIANAPOLIS 6, INDIANA

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TRADE NAME Hallcrafters, Model S-40  
 MANUFACTURER The Hallcrafters Co., Chicago 16, Illinois  
 TYPE SET AC Operated 4 Band Superheterodyne Communications - Commercial Type Receiver  
 TUBES (NINE) Types 6SG7 RF Amp., 6SA7 Mixer & Local Oscillator, 6SK7 1st IF Amp., 6SK7 2nd IF Amp.  
 6SK7 Det.-1AF, 6F6G Power Output, 6H6 AVC & Noise Limiter, 6J5GT Beat Frequency Osc.,  
 80 Rectifier.  
 POWER SUPPLY 117 Volts AC Rating .715 Amp. @ 117 Volts AC  
 6 Volt DC - Current Drain (Filament only, 5 amperes)  
 " " " Vibrator Power Supply  
 Approx. 10 Amperes.  
 TUNING RANGE—BROADCAST (Band 1) 550-1700KC SHORT WAVE (Band 2) 1.68-5.4MC (Band 3) 5.3-15.8MC  
 (Band 4) 15.3-44MC

## ALIGNMENT INSTRUCTIONS

DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
	High side to stator plates of center section of main tuning gang. Low side to chassis.	455KC	1	High end of band.	Across voice coil	A1, A2, A3, A4, A5, A6	Adjust for maximum output. Repeat until assured of accurate alignment. Signal level at the generator should be app. 52 microvolts for a 500 milliwatt audio output level.
							Turn off 400-cycle modulation on signal generator. Remove pitch control knob with an Allen wrench and adjust slotted screw shaft for zero beat. Replace knob so that red mark is on top.
390 ohm res. + 20% (non-inductive)	High side to terminal A1 of antenna terminal board. (leave jumper between A2 and GND. Low side to chassis.	3640	4	36MC	"	A7	Adjust for maximum output.
"	"	18MC	"	18MC	"	A8	Adjust for maximum output and repeat step on A7. If greatly detuned repeat adjustments on A7 and A8 several times.
"	"	36MC	"	36MC	"	A9, A10	Adjust for maximum output.
"	"	18MC	"	18MC	"	A11, A12	Adjust for maximum output and if greatly detuned repeat adjusts on A9, A10, A11 and A12 for maximum.
"	"	14MC	3	14MC	"	A13	Adjust for maximum output.
"	"	7MC	"	7MC	"	A14	Adjust for maximum output. Recheck adjust on A13 at 14MC and A14 at 7MC for maximum.
"	"	14MC	"	14MC	"	A15	Adjust for maximum output. Recheck A13 at 14MC and A14 at 7MC.
"	"	14MC 7MC	"	14MC 7MC	"	A16, A17	Adjust for maximum output.
"	"					A18, A19	Adjust for maximum output. Repeat adjustments as given on A16, A17, A18 and A19 for maximum output.
"	"	5MC	2	5MC	"	A20	Adjust for maximum output.
"	"	1.6MC	"	1.6MC	"	A21	Adjust for maximum output. Repeat adjustments as given on A20 and A21 for maximum output.
"	"	5MC	"	5MC	"	A22	Adjust for maximum output. Recheck A20 at 5MC and A21 at 1.6MC for maximum output.
"	"	5MC	"	5MC	"	A23, A24	Adjust for maximum output.
"	"	1500KC	1	1500KC	"	A25	Adjust for maximum output.
"	"	600KC	"	600KC	"	A26	Adjust for maximum output. Recheck A25 at 1500KC for maximum output.
"	"	1000KC	"	1000KC	"	A27	Adjust for maximum output. Repeat adjustments on A25 and A26 for maximum output at 1500 and 600KC.
"	"	1500KC	"	1500KC	"	A28, A29	Adjust for maximum output.

Before aligning allow approximately 10 minutes for signal generator and receiver to warm up. Use insulated alignment screwdriver for adjusting. Output from signal generator modulated at 400 Cycles and output attenuator on signal generator adjusted to give 500 milliwatt audio output on the output meter.  
 Set receiver controls as follows:  
 Sensitivity Control at maximum sensitivity (full clockwise).  
 Volume Control at maximum volume (full clockwise)

R.V.C. Switch at off.  
 Noise Limiter Switch at off.  
 CW-AM Switch at AM.  
 Tone Control at High.  
 Standby Receive Switch at Receive.  
 After completing the RF alignment check the image frequency to determine whether the oscillator frequency is higher than the signal frequency on bands 1, 2, and 3 and lower than signal frequency on band 4.





# PHOTO FACT\* Folder

TRADE MARK

HALLICRAFTERS MODEL S-40

**HALLICRAFTERS  
MODEL S-40**

**TRADE NAME** Hallicrafters, Model S-40  
**MANUFACTURER** The Hallicrafters Co., Chicago 16, Illinois  
**TYPE SET** AC Operated 4 Band Superheterodyne Communications - Commercial Type Receiver  
**TUBES (NINE)** Types 6SG7 RF Amp., 6SA7 Mixer & Local Oscillator, 6SK7 1st IF Amp., 6SK7 2nd IF Amp, 6SQ7 Det.-1AF, 6F6G Power Output, 6H6 AVC & Noise Limiter, 6J5GT Beat Frequency Osc., 80 Rectifier.  
**POWER SUPPLY** 117 Volts AC. Rating .715 Amp. @ 117 Volts AC  
 6 Volt DC - Current Drain (Filament only, 5 Amperes)  
 " " Vibrator Power Supply  
 Approx. 10 Amperes.  
**TUNING RANGE—BROADCAST** (Band 1) 550-1700KC **SHORT WAVE** (Band 2) 1.68-5.4MC (Band 3) 5.3-15.8MC (Band 4) 15.3-44MC

## ALIGNMENT INSTRUCTIONS

DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
	High side to stator plates of center section of main tuning gang. Low side to chassis.	455KC	1	High end of band.	Across voice coil	A1,A2, A3,A4, A5,A6.	Adjust for maximum output. Repeat until assured of accurate alignment. Signal level at the generator should be app. 52 microvolts for a 500 milliwatt audio output level.
	"	"	"	"	"		Turn off 400-cycle modulation on signal generator. Remove pitch control knob with an Allen wrench and adjust slotted screw shaft for zero beat. Replace knob so that red mark is on top.
390 ohm res. + 20% (non-inductive)	High side to terminal A1 of antenna terminal board. (leave jumper between A2 and GND. Low side to chassis.	36MC	4	36MC	"	A7	Adjust for maximum output.
"	"	18MC	"	18MC	"	A8	Adjust for maximum output and repeat step on A7. If greatly detuned repeat adjustments on A7 and A8 several times.
"	"	36MC	"	36MC	"	A9,A10	Adjust for maximum output.
"	"	18MC	"	18MC	"	A11,A12	Adjust for maximum output and if greatly detuned repeat adjusts on A9,A10, A11 and A12 for maximum.
"	"	14MC	3	14MC	"	A13	Adjust for maximum output.
"	"	7MC	"	7MC	"	A14	Adjust for maximum output. Recheck adjust on A13 at 14MC and A14 at 7MC for maximum.
"	"	10MC	"	10MC	"	A15	Adjust for maximum output. Recheck A13 at 14MC and A14 at 7MC.
"	"	14MC	"	14MC	"	A16,A17	Adjust for maximum output.
"	"	7MC	"	7MC	"	A18,A19	Adjust for maximum output. Repeat adjustments as given on A16, A17, A18 and A19 for maximum output.
"	"	5MC	2	5MC	"	A20	Adjust for maximum output.
"	"	1.8MC	"	1.8MC	"	A21	Adjust for maximum output. Repeat adjustments as given on A20 and A21 for maximum output.
"	"	3MC	"	3MC	"	A22	Adjust for maximum output. Recheck A20 at 5MC and A21 at 1.8MC for maximum output.
"	"	5MC	"	5MC	"	A23,A24	Adjust for maximum output.
"	"	1500KC	1	1500KC	"	A25	Adjust for maximum output.
"	"	600KC	"	600KC	"	A26	Adjust for maximum output. Recheck A25 at 1500KC for maximum output.
"	"	1000KC	"	1000KC	"	A27	Adjust for maximum output. Repeat adjustments on A25 and A26 for maximum output at 1500 and 600KC.
"	"	1500KC	"	1500KC	"	A28,A29	Adjust for maximum output.

Before aligning allow approximately 10 minutes for signal generator and receiver to warm up. Use insulated alignment screwdriver for adjusting. Output from signal generator modulated at 400 Cycles and output attenuator on signal generator adjusted to give 500 milliwatt audio output on the output meter. Set receiver controls as follows:  
 Sensitivity Control at maximum sensitivity (full clockwise).  
 Volume Control at maximum volume (full clockwise)

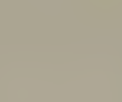
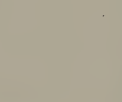
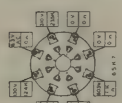
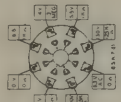
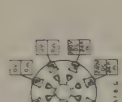
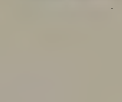
A.V.C. Switch at off.  
 Noise Limiter Switch at off.  
 CW-AM Switch at AM.  
 Tone Control at High.  
 Standby Receive Switch at Receive.  
 After completing the RF alignment check the image frequency to determine whether the oscillator frequency is higher than the signal frequency on bands 1, 2, and 3 and lower than signal frequency on band 4.

HALLICRAFTERS  
MODEL S-40

HALLICRAFTERS  
MODEL S-40

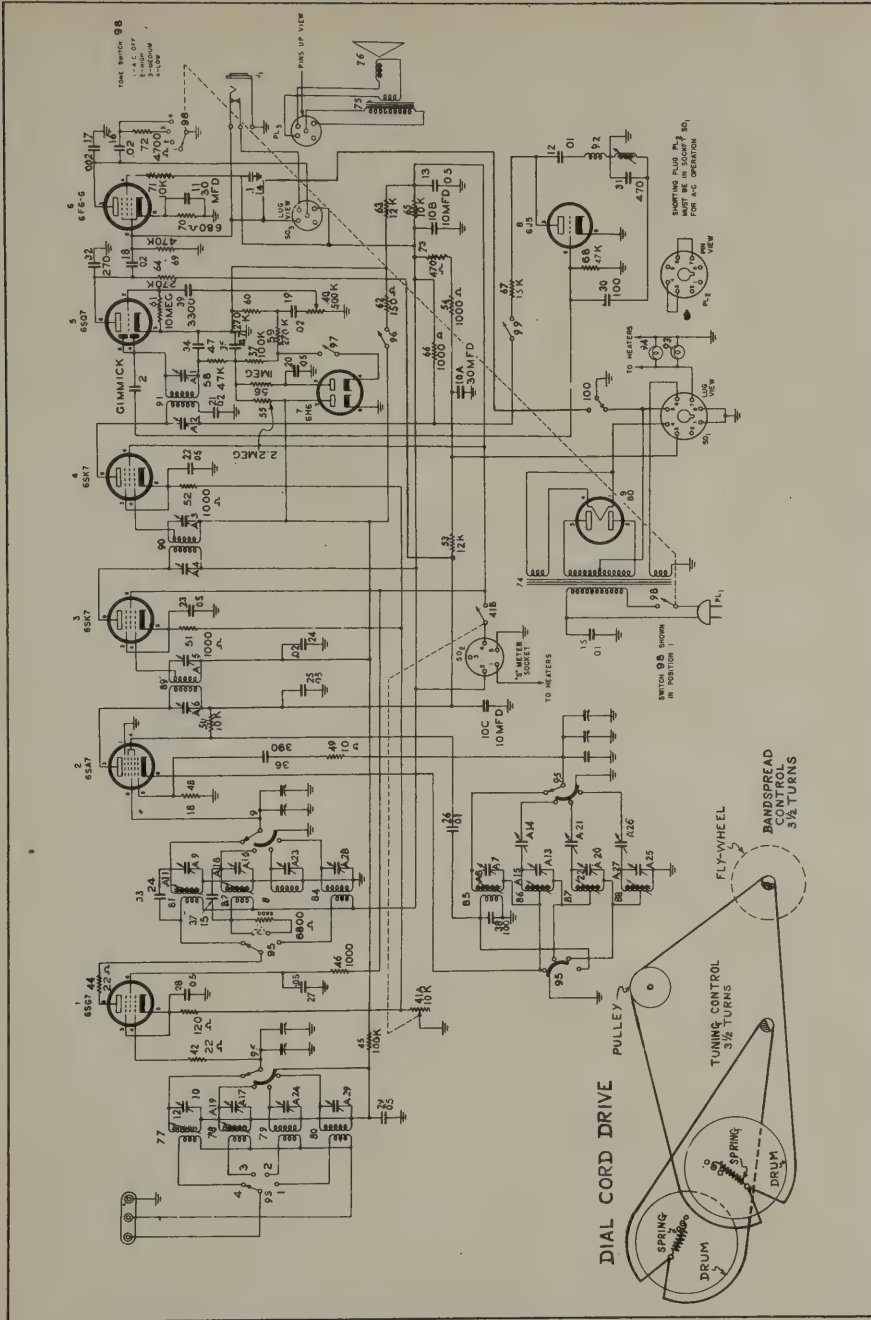






- 1 - DC Voltage measurements are at 20,000 ohms per volt; AC Voltages measured at 1000 ohms per volt.
- 2 - Socket connections are shown as bottom views.
- 3 - Measured values are from socket pin to common negative.
- 4 - Line voltage maintained at 117 volts for voltage readings.
- 5 - Nominal tolerance on component values makes possible a variation of  $\pm 10\%$  in voltage and resistance readings.
- 6 - Volume control at maximum, no signal applied for voltage measurements.

SCHEMATIC DIAGRAM



HOWARD W. SAMS & CO., INC.

2924 EAST WASHINGTON STREET • INDIANAPOLIS 6, INDIANA

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The stage gain measured values listed above are approximate values for an average operative stage, rather than an absolute value. It should be borne in mind that it is possible to introduce so many variables into the measurement operation, such as, type of equipment used for measuring, handling and placement of probes, the accuracy of alignment, etc., that an absolute reading is impractical. AVC is made inoperative and 3-volt battery bias substituted for measurement.

## PHOTO FACT\* Folder

HALLICRAFTERS MODEL S-40

HALLICRAFTERS  
MODEL S-40

TRADE NAME: Hallicrafters, Model S-40  
MANUFACTURER: The Hallicrafters Co., Chicago 16, Illinois  
TYPE SET: AC Operated 4 Band Superheterodyne Communications - Commercial Type Receiver  
TUBES (NINE): Types 68Q7 RF Amp., 6SA7 Mixer & Local Oscillator, 6SK7 1st IF Amp., 6SK7 2nd IF Amp, 6SC7 Det.-1AF, 6F6G Power Output, 6H6 AVC & Noise Limiter, 6J5GT Beat Frequency Osc., 80 Rectifier.  
POWER SUPPLY: 117 Volts AC Rating .715 Amp. @ 117 Volts AC  
6 Volt DC - Current Drain (Filament only, 5 amperes)  
Vibrator Power Supply  
Approx. 10 Amperes.  
TUNING RANGE-BROADCAST: (Band 1) 550-1700KC (Band 2) 1.68-5.4MC (Band 3) 5.3-15.2MC (Band 4) 15.3-44MC

### ALIGNMENT INSTRUCTIONS

DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	BAND SWITCH POS.	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
	High side to stator plates of center section of main tuning gang. Low side to chassis.	455KC	1	High end of band.	Across voice coil	A1, A2, A3, A4, A5, A6.	Adjust for maximum output. Repeat until assured of accurate alignment. Signal level at the generator should be app. 52 microvolts for a 500 milliwatt audio output level.
							Turn off 400-cycle modulation on signal generator. Remove pitch control knob with an Allen wrench and adjust slotted screw shaft for zero beat. Replace knob so that red mark is on top.
390 ohm res. + 20K (non-inductive)	High side to terminal A1 of antenna terminal board. (leave jumper between A2 and GND. Low side to chassis.	36MC	4	36MC	"	A7	Adjust for maximum output.
"	"	18MC	"	18MC	"	A8	Adjust for maximum output and repeat step on A7. If greatly detuned repeat adjustments on A7 and A8 several times.
"	"	36MC	"	36MC	"	A9, A10	Adjust for maximum output.
"	"	18MC	"	18MC	"	A11, A12	Adjust for maximum output and if greatly detuned repeat adjustments on A9, A10, A11 and A12 for maximum.
"	"	14MC	3	14MC	"	A13	Adjust for maximum output.
"	"	7MC	"	7MC	"	A14	Adjust for maximum output. Recheck adjust on A13 at 14MC and A14 at 7MC for maximum.
"	"	10MC	"	10MC	"	A15	Adjust for maximum output. Recheck A13 at 14MC and A14 at 7MC.
"	"	14MC	"	14MC	"	A16, A17	Adjust for maximum output.
"	"	7MC	"	7MC	"	A18, A19	Adjust for maximum output. Repeat adjustments as given on A16, A17, A18 and A19 for maximum output.
"	"	5MC	2	5MC	"	A20	Adjust for maximum output.
"	"	1.8MC	"	1.8MC	"	A21	Adjust for maximum output. Repeat adjustments as given on A20 and A21 for maximum output.
"	"	3MC	"	3MC	"	A22	Adjust for maximum output. Recheck A20 at 5MC and A21 at 1.8MC for maximum output.
"	"	5MC	"	5MC	"	A23, A24	Adjust for maximum output.
"	"	1500KC	1	1500KC	"	A25	Adjust for maximum output.
"	"	600KC	"	600KC	"	A26	Adjust for maximum output. Recheck A25 at 1500KC for maximum output.
"	"	1000KC	"	1000KC	"	A27	Adjust for maximum output. Repeat adjustments on A25 and A26 for maximum output at 1500 and 600KC.
"	"	1500KC	"	1500KC	"	A28, A29	Adjust for maximum output.

Before aligning allow approximately 10 minutes for signal generator and receiver to warm up. Use insulated alignment screwdriver for adjusting. Output from signal generator modulated at 400 Cycles and output attenuator on signal generator adjusted to give 500 milliwatt audio output on the output meter.

Set receiver controls as follows:

Sensitivity Control at maximum sensitivity

(full clockwise).

Volume Control at maximum volume (full clockwise)

A.V.C. Switch at off.

Noise Limiter Switch at off.

CW-AM Switch at AM.

Tone Control at High.

Standby Receive Switch at Receive.

After completing the RF alignment check the image frequency to determine whether the oscillator frequency is higher than the signal frequency on bands 1, 2, and 3 and lower than signal frequency on band 4.

HALLICRAFTERS  
MODEL S-40



# PARTS LIST AND DESCRIPTIONS

## R F COILS

ITEM No.	USE	DC RES.		REPLACEMENT DATA	
		PRI.	SEC.	HALL-CRAFTER PART No.	MESSNER PART No.
77	Band 4 Ant.	.1Ω	Ω	51B783	
78	Band 3 Ant.	.1Ω	Ω	51B782	
79	Band 2 Ant.	.5Ω	1.5Ω	51B781	
80	Band 1 Ant.	25Ω	5Ω	51B780	
81	Band 4 RF	1.2Ω	Ω	51B787	
82	Band 3 RF	7.5Ω	Ω	51B786	
83	Band 2 RF	.8Ω	Ω	51B785	
84	Band 1 RF	.1Ω	Ω	51B784	
85	Band 4 Osc.	Ω	Ω	51B791	
86	Band 3 Osc.	Ω	Ω	51B790	
87	Band 2 Osc.	.1Ω	1.2Ω	51B789	
88	Band 1 Osc.	.5Ω	5Ω	51B788	
89	Input IF	21Ω	6.5Ω	50H185	
90	Interstage IF	20Ω	4Ω	50C185	
91	Output IF	18Ω	18Ω	50C192	
92	B.F.O.	11Ω		54B028	

## DIAL LIGHT

ITEM No.	BASE TYPE	VOLTS	AMPS.	REPLACEMENT DATA		INSTALLATION NOTES
				BEAD COLOR	HALL-CRAFTER PART No.	
93	Bayonet	6-8	0.25	Blue	39A003	Type 44 "
94	"	6-8	0.25	Blue	39A003	

## MISCELLANEOUS

ITEM No.	PART NAME	HALL-CRAFTER PART No.	NOTES
A14	Trimmer	44B141	Oscillator Pad, Band 3
A21	"	44A1024	Oscillator Pad, Band 2
A26	"	44A142	Oscillator Pad, Band 1
95A	Band Switch	62B039	Antenna & RF Sections
95B	"	62B044	Osc. Sections
96	"	74C172	Drive Spdt
97	Switch (AVC)	60A138	SPST Toggle
98	Switch (Tone)	60A138	"
98A	Switch (On-Off)	60A225	SP4T Tone Switch
98B	Switch (On-Off)	60A225	SPST On-Off
99	Switch (AM-Off)	60A138	SPST Toggle
100	Tuning Cap.	43C138	SPST
	Jack (Head Ph.)	35A002	Main Tuning & Bandsread Caps.
			Closed Circuit



The stage gain measured values listed above are approximate values for an average operative stage, rather than an absolute value. It should be borne in mind that it is possible to introduce so many variables into the measurement operation, such as, type of equipment used for measuring, handling and placement of probes, the accuracy of alignment, etc., that an absolute reading is impractical. AVC is made inoperative and 3-volt battery bias substituted for measurement.



# PARTS LIST AND DESCRIPTIONS

## R F COILS

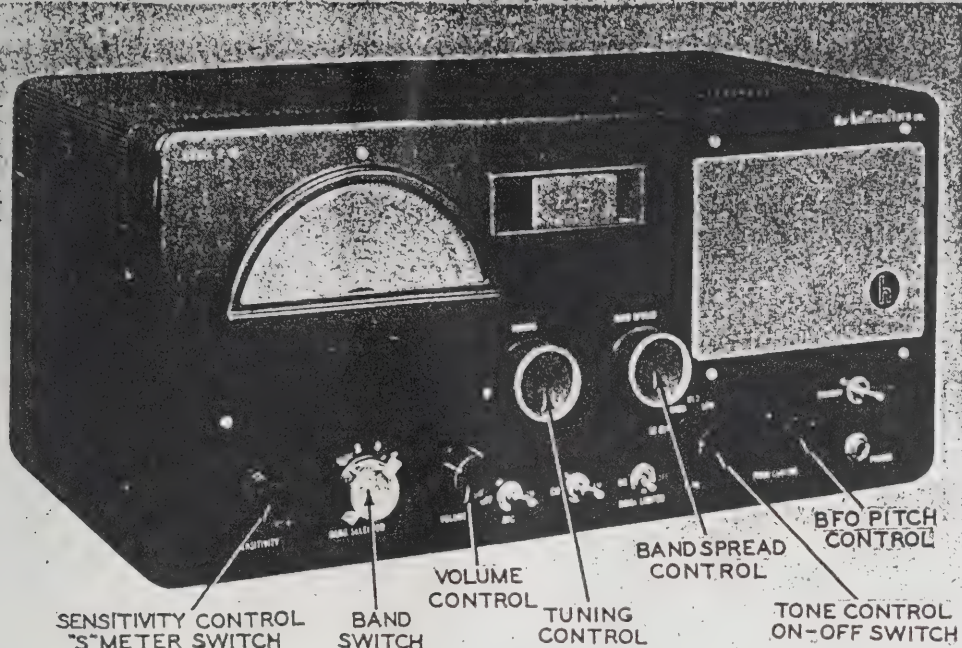
ITEM No.	USE	DC RES.		REPLACEMENT DATA	
		PRI.	SEC.	HALLI-CHARTER PART No.	WEISSNER PART No.
77	Band 4 Ant.	.12	02	51B783	
78	Band 3 Ant.	.12	02	51B782	
79	Band 2 Ant.	.52	1.52	51B781	
80	Band 1 Ant.	.252	02	51B780	
81	Band 4 RF	1.22	02	51B787	
82	Band 3 RF	.82	02	51B786	
83	Band 2 RF	.82	02	51B785	
84	Band 1 RF	.12	02	51B784	
85	Band 4 Osc.	02	02	51B791	
86	Band 3 Osc.	02	02	51B790	
87	Band 2 Osc.	.12	1.22	51B789	
88	Band 1 Osc.	.52	02	51B788	
89	Input IF	212	6.52	50H185	
90	Interstage IF	202	42	50C185	
91	Output IF	182	182	50C192	
92	B.F.O.	112		51B029	

## DIAL LIGHT

ITEM No.	BASE TYPE	VOLTS	AMPS.	REPLACEMENT DATA		INSTALLATION NOTES
				READ COLOR	HALLI-CHARTER PART No.	
93	Bayonet	6-8	0.25	Blue	39A003	Type 44 "
94	"	6-8	0.25	Blue	39A003	

## MISCELLANEOUS

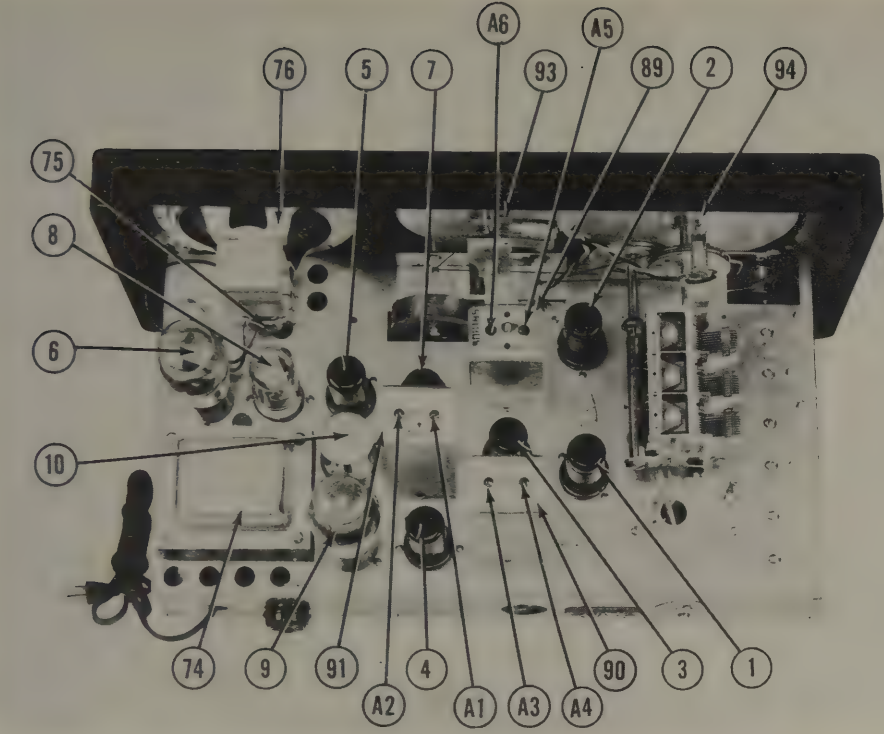
ITEM No.	PART NAME	HALLI-CHARTER PART No.	NOTES
A14	Trimmer	44B141	Oscillator Pad, Band 3
A21	"	44A024	Oscillator Pad, Band 2
A26	"	44A142	Oscillator Pad, Band 1
95A	Band Switch	62B039	Antenna & RF Sections
95B	"	62A044	Osc. Sections
95C	"	74C172	Drive Shaft
96	Switch (AVC)	60A138	SPST Toggle
97	Switch (Tone)	60A138	"
98A	Switch (On-Off)	60A225	SP4T Tone Switch
98B	Switch (On-Off)	60A225	SPST On-Off
99	Switch (ST-REC)	60A138	SPST Toggle
100	Tuning Cap. Jack(Head Ph.)	43C138	Main Tuning & bandsread Caps.
		39A002	Closed Circuit





## PARTS LIST AND DESCRIPTIONS

## CHASSIS—TOP VIEW



ITEM No.	USE	REPLACEMENT DATA		RMA STANDARD TYPE	INSTALLATION NOTES
		HALL-FASTER PART No.	REPLACEMENT		
1	RF Amp.	68A7	68A7	68A7	
2	Driver & Local Oscillator	68A7	68A7	68A7	
3	Let IF Amp.	68K7	68K7	68K7	
4	Let IF Amp.	68K7	68K7	68K7	
5	Let IF Amp.	68K7	68K7	68K7	
6	Power Output	68K7	68K7	68K7	
7	AVC & Noise Limiter	68K7	68K7	68K7	
8	Rectifier	68K7	68K7	68K7	
9	Rectifier	68K7	68K7	68K7	

## CAPACITORS

Capacity values given in the rating column are in mfd. for Electrolytic and Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING	REPLACEMENT DATA		SOLAR PART No.	AEROVOX PART No.	IDENTIFICATION CODES AND INSTALLATION NOTES
		HALL-FASTER PART No.	REPLACEMENT			
10	1000	68A7	68A7	68A7	68A7	
11	1000	68A7	68A7	68A7	68A7	
12	1000	68A7	68A7	68A7	68A7	
13	1000	68A7	68A7	68A7	68A7	
14	1000	68A7	68A7	68A7	68A7	
15	1000	68A7	68A7	68A7	68A7	
16	1000	68A7	68A7	68A7	68A7	
17	1000	68A7	68A7	68A7	68A7	
18	1000	68A7	68A7	68A7	68A7	
19	1000	68A7	68A7	68A7	68A7	
20	1000	68A7	68A7	68A7	68A7	
21	1000	68A7	68A7	68A7	68A7	
22	1000	68A7	68A7	68A7	68A7	
23	1000	68A7	68A7	68A7	68A7	
24	1000	68A7	68A7	68A7	68A7	
25	1000	68A7	68A7	68A7	68A7	
26	1000	68A7	68A7	68A7	68A7	
27	1000	68A7	68A7	68A7	68A7	
28	1000	68A7	68A7	68A7	68A7	
29	1000	68A7	68A7	68A7	68A7	
30	1000	68A7	68A7	68A7	68A7	
31	1000	68A7	68A7	68A7	68A7	
32	1000	68A7	68A7	68A7	68A7	
33	1000	68A7	68A7	68A7	68A7	
34	1000	68A7	68A7	68A7	68A7	
35	1000	68A7	68A7	68A7	68A7	
36	1000	68A7	68A7	68A7	68A7	
37	1000	68A7	68A7	68A7	68A7	
38	1000	68A7	68A7	68A7	68A7	
39	1000	68A7	68A7	68A7	68A7	

For Hall-Faster, see page 10. For Solar, see page 11. For Cornell Dubilier, see page 12. For other manufacturers, see page 13.

## CONTROLS

ITEM No.	RATING	REPLACEMENT DATA		MALLORY PART No.	IRC PART No.	CLAROSTAT PART No.	INSTALLATION NOTES
		HALL-FASTER PART No.	REPLACEMENT				
40	1000	68A7	68A7	68A7	68A7	68A7	
41	1000	68A7	68A7	68A7	68A7	68A7	
42	1000	68A7	68A7	68A7	68A7	68A7	

PARTS LIST AND DESCRIPTIONS  
RESISTORS

ITEM No.	RATING	REPLACEMENT DATA		HALL-FASTER PART No.	IRC PART No.	IDENTIFICATION CODES
		HALL-FASTER PART No.	REPLACEMENT			
43	1000	68A7	68A7	68A7	68A7	
44	1000	68A7	68A7	68A7	68A7	
45	1000	68A7	68A7	68A7	68A7	
46	1000	68A7	68A7	68A7	68A7	
47	1000	68A7	68A7	68A7	68A7	
48	1000	68A7	68A7	68A7	68A7	
49	1000	68A7	68A7	68A7	68A7	
50	1000	68A7	68A7	68A7	68A7	
51	1000	68A7	68A7	68A7	68A7	
52	1000	68A7	68A7	68A7	68A7	
53	1000	68A7	68A7	68A7	68A7	
54	1000	68A7	68A7	68A7	68A7	
55	1000	68A7	68A7	68A7	68A7	
56	1000	68A7	68A7	68A7	68A7	
57	1000	68A7	68A7	68A7	68A7	
58	1000	68A7	68A7	68A7	68A7	
59	1000	68A7	68A7	68A7	68A7	
60	1000	68A7	68A7	68A7	68A7	
61	1000	68A7	68A7	68A7	68A7	
62	1000	68A7	68A7	68A7	68A7	
63	1000	68A7	68A7	68A7	68A7	
64	1000	68A7	68A7	68A7	68A7	
65	1000	68A7	68A7	68A7	68A7	
66	1000	68A7	68A7	68A7	68A7	
67	1000	68A7	68A7	68A7	68A7	
68	1000	68A7	68A7	68A7	68A7	
69	1000	68A7	68A7	68A7	68A7	
70	1000	68A7	68A7	68A7	68A7	
71	1000	68A7	68A7	68A7	68A7	
72	1000	68A7	68A7	68A7	68A7	
73	1000	68A7	68A7	68A7	68A7	

Note 1-Used in early production. Note 2-Used in later production.

## TRANSFORMER (POWER)

ITEM No.	RATING	REPLACEMENT DATA		HALL-FASTER PART No.	IRC PART No.	IDENTIFICATION CODES
		HALL-FASTER PART No.	REPLACEMENT			
74	1000	68A7	68A7	68A7	68A7	

## TRANSFORMER (OUTPUT)

ITEM No.	RATING	REPLACEMENT DATA		HALL-FASTER PART No.	IRC PART No.	IDENTIFICATION CODES
		HALL-FASTER PART No.	REPLACEMENT			
75	1000	68A7	68A7	68A7	68A7	

## SPEAKER

ITEM No.	RATING	REPLACEMENT DATA		HALL-FASTER PART No.	IRC PART No.	IDENTIFICATION CODES
		HALL-FASTER PART No.	REPLACEMENT			
76	1000	68A7	68A7	68A7	68A7	

PARTS LIST AND DESCRIPTIONS  
R F COILS

ITEM No.	USE	REPLACEMENT DATA		HALL-FASTER PART No.	IRC PART No.	IDENTIFICATION CODES
		HALL-FASTER PART No.	REPLACEMENT			
77	Band 4 Ant.	68A7	68A7	68A7	68A7	
78	Band 3 Ant.	68A7	68A7	68A7	68A7	
79	Band 2 Ant.	68A7	68A7	68A7	68A7	
80	Band 1 Ant.	68A7	68A7	68A7	68A7	
81	Band 4 RF	68A7	68A7	68A7	68A7	
82	Band 3 RF	68A7	68A7	68A7	68A7	
83	Band 2 RF	68A7	68A7	68A7	68A7	
84	Band 1 RF	68A7	68A7	68A7	68A7	
85	Band 4 Osc.	68A7	68A7	68A7	68A7	
86	Band 3 Osc.	68A7	68A7	68A7	68A7	
87	Band 2 Osc.	68A7	68A7	68A7	68A7	
88	Band 1 Osc.	68A7	68A7	68A7	68A7	
89	Input IF	68A7	68A7	68A7	68A7	
90	Intermediate IF	68A7	68A7	68A7	68A7	
91	AF	68A7	68A7	68A7	68A7	
92	AF	68A7	68A7	68A7	68A7	

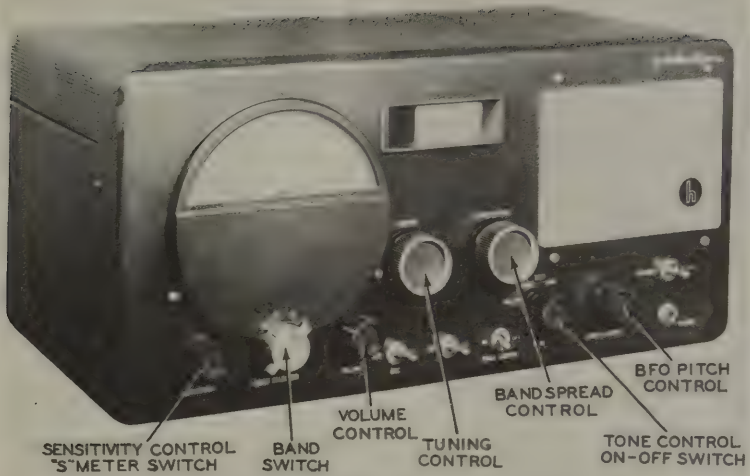
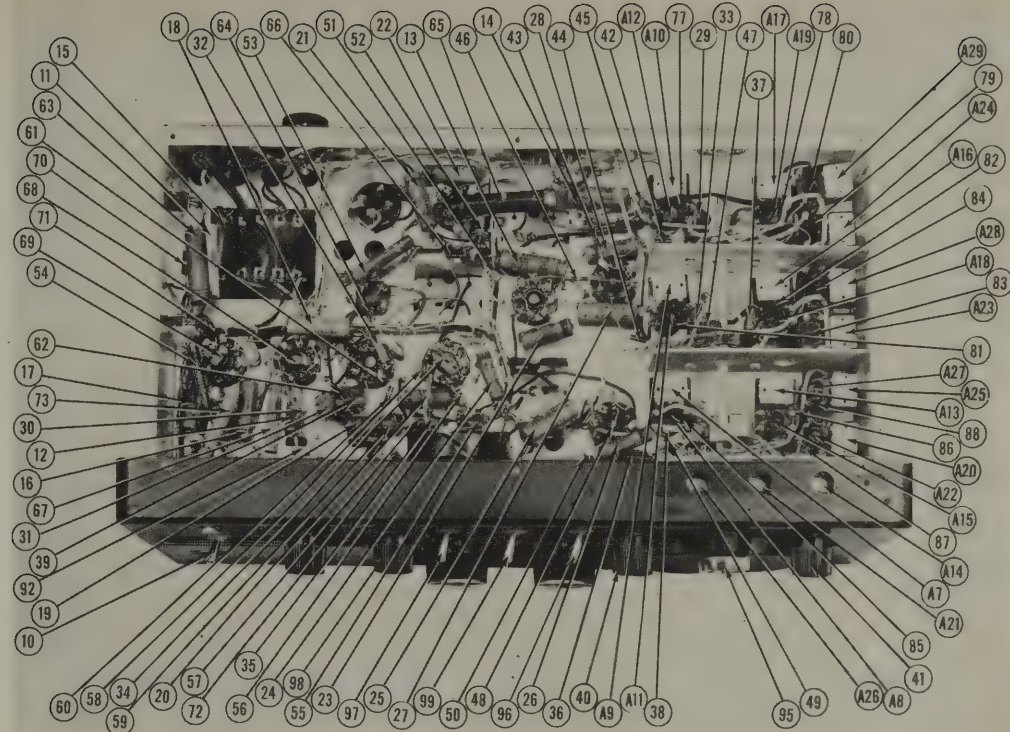
## DIAL LIGHT

ITEM No.	BASE TYPE	AMPS.	REPLACEMENT DATA		INSTALLATION NOTES
			HALL-FASTER PART No.	IRC PART No.	
93	Bayonet	0.25	68A7	68A7	
94	Bayonet	0.25	68A7	68A7	

## MISCELLANEOUS

ITEM No.	PART NAME	HALL-FASTER PART No.	NOTES
95	Trimmer	68A7	
96	Antenna	68A7	
97	Antenna	68A7	
98	Antenna	68A7	
99	Antenna	68A7	
100	Antenna	68A7	

## CHASSIS—BOTTOM VIEW





# PARTS LIST AND DESCRIPTIONS

## R F COILS

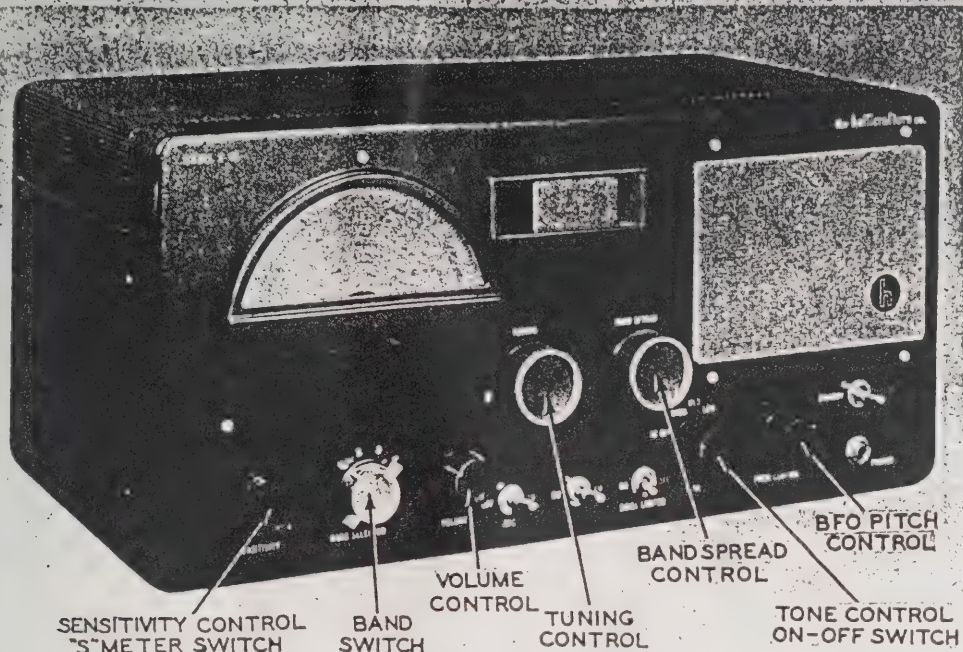
ITEM No.	USE	DC RES.		REPLACEMENT DATA	
		PRI.	SEC.	HALL CRAFTERS PART No.	MEISSNER PART No.
77	Band 4 Ant.	.12	02	51B783	
78	Band 3 Ant.	.12	02	51B782	
79	Band 2 Ant.	.52	1.52	51B781	
80	Band 1 Ant.	.252	52	51B780	
81	Band 4 RF	1.22	02	51B787	
82	Band 3 RF	7.52	02	51B786	
83	Band 2 RF	.82	52	51B785	
84	Band 1 RF	.12	02	51B784	
85	Band 4 OSC.	02	02	51B791	
86	Band 3 OSC.	02	02	51B790	
87	Band 2 OSC.	.12	1.22	51B789	
88	Band 1 OSC.	.52	52	51B788	
89	Input IF	212	6.52	50H185	
90	Interstage IF	202	42	50C185	
91	Output IF	182	12	50C192	
92	B.F.O.	112		51B028	

## DIAL LIGHT

ITEM No.	BASE TYPE	VOLTS	AMPS.	REPLACEMENT DATA		INSTALLATION NOTES
				BEAD COLOR	HALL CRAFTERS PART No.	
93	Bayonet	6-8	0.25	Blue	39A003	Type 44 "
94		6-8	0.25	Blue	39A003	

## MISCELLANEOUS

ITEM No.	PART NAME	HALL CRAFTERS PART No.	NOTES
A14	Trimmer	44B141	Oscillator Pad, Band 3
A21	"	44A024	Oscillator Pad, Band 2
A26	"	44A142	Oscillator Pad, Band 1
55A	Band Switch	62B039	Antenna & RF Sections
95B	"	62A044	Osc. Sections
95C	"	74C172	Drive Shaft
96	Switch (AVC)	60A138	SPST Toggle
97	Switch (Tone)	60A138	"
98A	Switch (On-Off)	60A225	SP4T Tone Switch
98B	Switch (On-Off)	60A225	SPST On-Off
99	Switch (ST-REC)	60A135	SPST Toggle
100	Tuning Cap. Jack (Head Ph.)	43C138	SPDT
		58A002	Main Tuning & bandsread Caps. Closed Circuit







# CHASSIS—TOP VIEW

## PARTS LIST AND DESCRIPTIONS

### TUBES

ITEM No.	USE	REPLACEMENT DATA	RAVA BASE TYPE	INSTALLATION NOTES
		MULLICAP PART No.	STANDARD REPLACEMENT	
1	1F amp.	65J7	65J7	50K
2	Driver & Local Oscillator	65K7	65K7	5K
3	1st IF amp.	65K7	65K7	5K
4	2nd IF amp.	65K7	65K7	5K
5	Det., 1st audio	65K7	65K7	5K
6	Power Output	65K7	65K7	5K
7	AVC & helise	65K7	65K7	5K
8	Detector	65K7	65K7	5K
9	Rectifier	65K7	65K7	5K

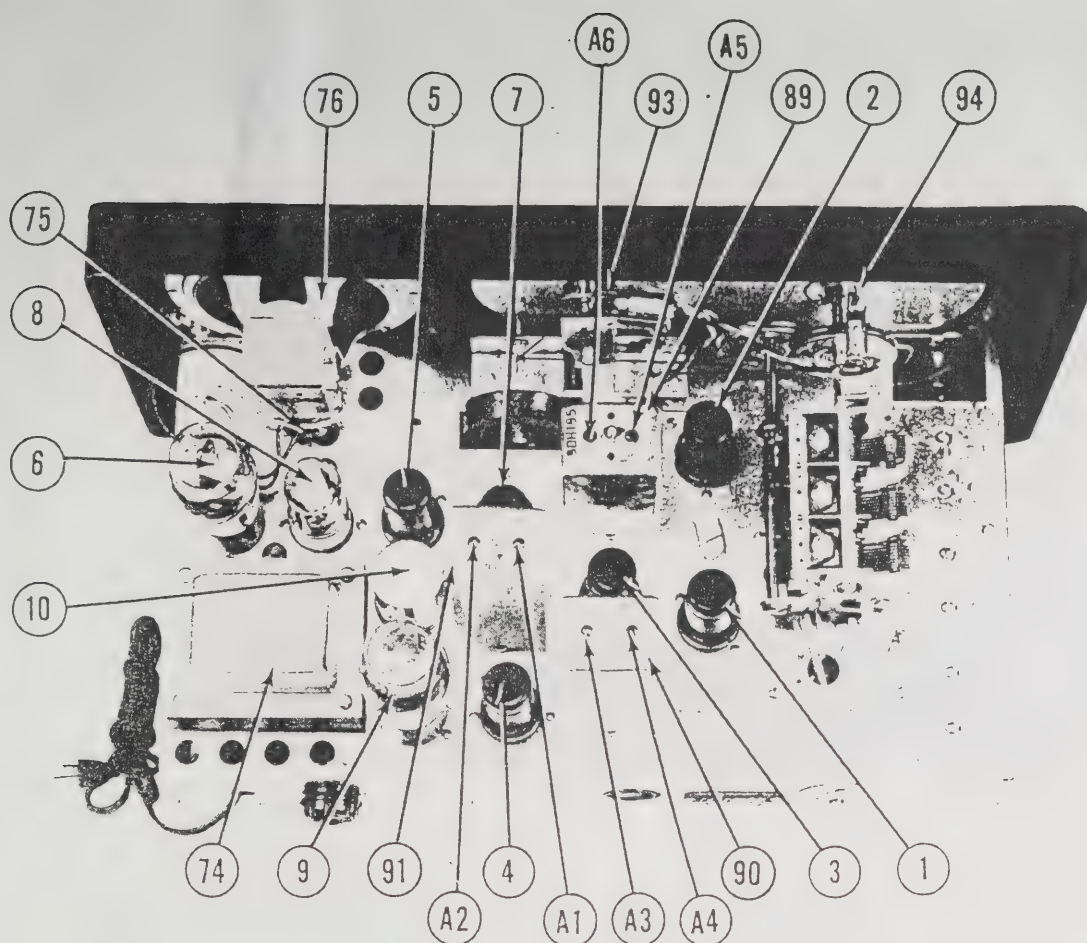
### CAPACITORS

Capacity values given in the rating column are in mfd. for Electrolytic and Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING		REPLACEMENT DATA		CORREL. PART No.	AEROVOX PART No.	SPRAGUE PART No.	CORREL. PART No.	IDENTIFICATION CODES
	CAP	VOLT	MALLORY PART No.	SOLAR PART No.					
1	50	450	10425	10425-100	EL-124	10425-100	10425-100	10425	Filter
2	10	100	10425	10425-100	10425-100	10425-100	10425-100	10425	"
3	10	100	10425	10425-100	10425-100	10425-100	10425-100	10425	"
4	10	100	10425	10425-100	10425-100	10425-100	10425-100	10425	"
5	10	100	10425	10425-100	10425-100	10425-100	10425-100	10425	"
6	10	100	10425	10425-100	10425-100	10425-100	10425-100	10425	"
7	10	100	10425	10425-100	10425-100	10425-100	10425-100	10425	"
8	10	100	10425	10425-100	10425-100	10425-100	10425-100	10425	"
9	10	100	10425	10425-100	10425-100	10425-100	10425-100	10425	"
10	10	100	10425	10425-100	10425-100	10425-100	10425-100	10425	"
11	10	100	10425	10425-100	10425-100	10425-100	10425-100	10425	"
12	10	100	10425	10425-100	10425-100	10425-100	10425-100	10425	"
13	10	100	10425	10425-100	10425-100	10425-100	10425-100	10425	"
14	10	100	10425	10425-100	10425-100	10425-100	10425-100	10425	"
15	10	100	10425	10425-100	10425-100	10425-100	10425-100	10425	"
16	10	100	10425	10425-100	10425-100	10425-100	10425-100	10425	"
17	10	100	10425	10425-100	10425-100	10425-100	10425-100	10425	"
18	10	100	10425	10425-100	10425-100	10425-100	10425-100	10425	"
19	10	100	10425	10425-100	10425-100	10425-100	10425-100	10425	"
20	10	100	10425	10425-100	10425-100	10425-100	10425-100	10425	"
21	10	100	10425	10425-100	10425-100	10425-100	10425-100	10425	"
22	10	100	10425	10425-100	10425-100	10425-100	10425-100	10425	"
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99	10	100	10425	10425-100	10425-100	10425-100	10425-100	10425	"
100	10	100	10425	10425-100	10425-100	10425-100	10425-100	10425	"

### CONTROLS

ITEM No.	RATING	REPLACEMENT DATA	INSTALLATION NOTES
	RESISTANCE	MULLICAP PART No.	
1	50K	50K-50	Volume control
2	50K	50K-50	Attach to 40K per instructions
3	50K	50K-50	Sensitivity control
4	50K	50K-50	Attach to 40K per instructions







CHASSIS—BOTTOM VIEW

TRANSFORMER (POWER)

ITEM No.	RATING			REPLACEMENT DATA		
	PRI	SEC. 1	SEC. 2	SEC. 3	STANCOR PART No.	THORDARSON PART No.
74	117V-0 2.5/100	50-0V-0 1.0/100	50-0V-0 1.0/100	50-0V-0 1.0/100	160121	174115

[illegible]

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ITEM No.	RATINGS	REPLACEMENT DATA		INSTALLATION NOTES
		UNIT PART No.	SENSING PART No.	
1	Field Control Control	3800-5	380-74	4-Post Date: 12/29/2010 10:10:01 AM
2	Field Control Control	3800-5	380-74	4-Post Date: 12/29/2010 10:10:01 AM



• TRADE MARK

TRADE NAME	Hallcraft
MANUFACTURER	The Halli
TYPE SET	AC Operat
TUBES (NINE)	Types 6SG 6SG7 Det. 80 Rectif
POWER SUPPLY	117 Volts 6 Volt DC

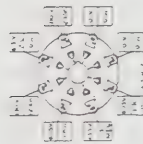
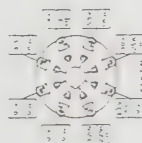
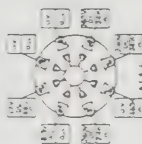
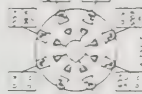
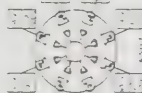
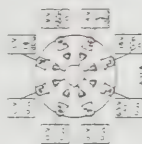
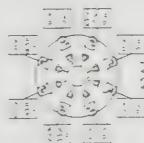
APPROX. 10

TUNING RANGE—BROADCAST

[illegible]

before allowing allow ap-  
rior signal generator and  
the insulated alignment  
ing. Output from signal  
400 cycles and output at  
transmitter to give  
input on the signal refer-  
ence receiver controls as  
sensitivity control at a  
full clockwise.  
Volume Control at max/min

## VOLTAGE AND RESISTANCE ANALYSIS CHART



- 1 - DC Voltage measurements are at 20,000 ohms per volt: AC Voltages measured at 1000 ohms per volt.
- 2 - Socket connections are shown as bottom views.
- 3 - Measured values are from socket pin to common negative.
- 4 - Line voltage maintained at 117 volts for voltage readings.
- 5 - Nominal tolerance on component values makes possible a variation of  $\pm 10\%$  in voltage and resistance readings.
- 6 - Volume control at maximum, no signal applied for voltage measurements.





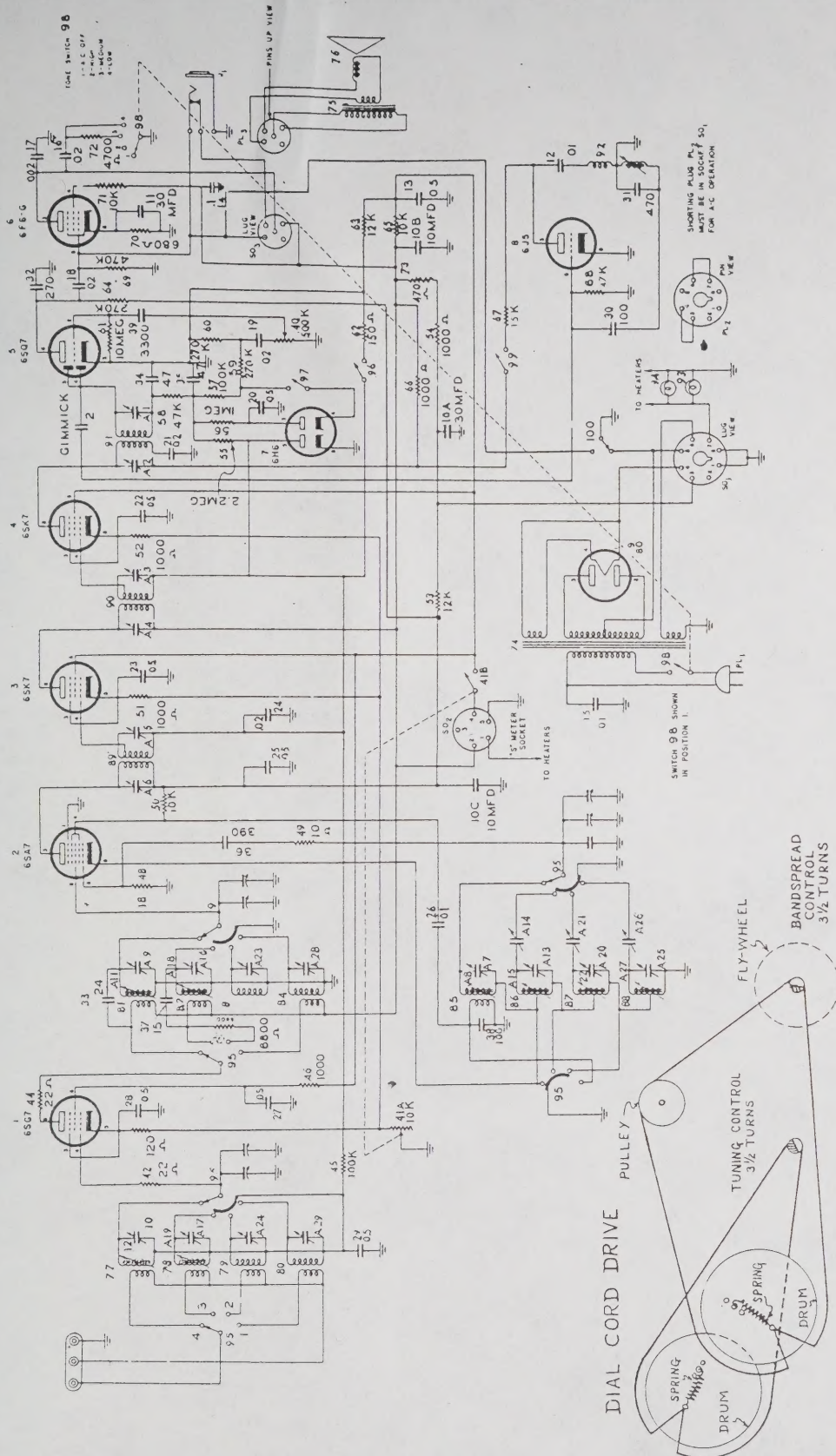
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# SCHEMATIC DIAGRAM



The stage gain measured values listed above are approximate values for an average operative stage, rather than an absolute value. It should be borne in mind that it is possible to introduce so many variables into the measurement operation, such as, type of equipment used for measuring, handling and placement of probes, the accuracy of alignment, etc., that an absolute reading is impractical. AVC is made inoperative and 3-volt battery bias substituted for measurement.

HOWARD W. SAMS & CO., INC.

2924 EAST WASHINGTON STREET • INDIANAPOLIS 6, INDIANA

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